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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KASSA, YOSEF

ART UNIT PAPER NUMBER

2625

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,503

Applicant(s)

HORIE, DAISAKU

Examiner

YOSEF KASSA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 6-11 is/are rejected.
- 7) ☒ Claim(s) 3-5, 12 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

1. Applicant's arguments, (pages 6-10) filed on 03/07/2005, with respect to claims 1-10 under Oura (U.S. Patent 6,128,416) and Xiong (US Patent 6,359,617) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made on the newly added claims of 11-13 and previously rejected claims of 1-10 on Oura (U.S. Patent 6,128,416) in view of Takiguchi et al (U.S. Patent 6,549,681).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 6-11 and rejected under 35 U.S.C. 103(a) as being unpatentable over Oura (U.S. Patent 6,128,416), and further in view of Takiguchi et al (U.S. Patent 6,549,681).

With regard to claim 1, Oura discloses an image input section (see Fig. 2, item 11) which inputs two adjacent images (note that picked up images are connected with each other), wherein the images partially overlap with each other (see Fig. 1, overlap region 3);

an overlap region determining section which determines an overlap region of the images (see col. 5, lines 3-9, the process of determine the common subjects as marks for overlapping region);

a first region determining section which determines a first region within the overlap region determined (see col. 5, lines 20-24);

a second pixel value, i.e., block 6 of Fig. 1, determining section which determines a pixel value in a second region within the overlap region based on respective pixel values of the two adjacent images, wherein the second region is a region of the overlap region other than the first region (see col. 5, lines 54-61, the process of determining an average density value of the blocks which reads on pixel value determining section);
and

an image joining section, i.e., image composing, which join the two adjacent images with each other by utilizing the determined pixel value in the first region and the determined pixel value in the second region as pixel values in respective regions of the overlap region (see col. 5, lines 25-35, note that the composing of two image performed by determining the position of first and second reference blocks).

Oura does not expressly call for determining a pixel value in the first region based on a pixel value of one of the two adjacent images. However, in the same field of endeavor, Takiguchi teaches this feature (see col. 5, lines 27-45). At the time of the invention was made, it would have been obvious to a person of an ordinary skill in the art to incorporate the teaching of Taliguchi image synthesizing process into Oura's system. The suggestion/motivation doing so would have been to extract an image

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segment from one of the plurality of image data set and superimposing the segment image. Therefore, it would have been obvious to combine Takeguchi with Oura to obtain the invention as specified in claim 1.

With regard to claim 2, Oura discloses wherein said first region determining section includes dividing means for dividing the overlap region into predetermined blocks (see col. 4, lines 64-67), and comparing, i.e., correlation, means for comparing the two images with respect to pixel values of the predetermined blocks, the first region being determined based on the result of the comparison by the comparing means (see col. 5, lines 25-30).

With regard to claim 6, Oura discloses wherein said second pixel value determining section determines a pixel value by weighted, i.e., calculated displacement amount, mean processing related with a position (see col. 5, lines 25-36 and col. 5, lines 54-62).

With regard to claim 7, Oura discloses wherein said first pixel value determining section includes judging means for judging which one of the two adjacent images is close to the determined first region when images are joined with each other (see col. 5, lines 1-6), the image which is judged to be closer being utilized as one of the images, the pixel value in the first region being determined based on the pixel value of the one image (see col. 5, lines 7-13).

With regard to claim 8, Oura discloses wherein said first pixel value determining section includes contrast comparing means for comparing the two adjacent images with respect to a contrast of pixels in the determined first region (see col. 5, lines 3-12), one

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of the images being determined based on a the result of comparison by the contrast comparing means, the pixel value in the first region being determined based on the pixel value of the one image (see col. 5, lines 25-32).

Claim 9 is similarly analyzed and rejected the same as claim 1.

Claim 10 is similarly analyzed and rejected the same as claim 1. Except, the additional limitation of "a computer readable medium storing an image processing method", Oura does not expressly call for this. However, Takiguchi teaches this feature (see col. 10, lines 62-67). At the time of the invention was made, it would have been obvious to a person of an ordinary skill in the art to incorporate the teaching of Taliguchi personal computer system into Oura's system. The suggestion/motivation doing so would have been to process synthesize image in a computer system. Therefore, it would have been obvious to combine Takeguchi with Oura to obtain the invention as specified in claim 1.

Claim 11 is similarly analyzed and rejected the same as claim 1. Except, the additional limitation of "calculating from pixels in corresponding positions in both the first and second images are used portions of the composite image corresponding to the second region of pixels" (see col. 5, lines 25-37).

Allowable Subject Matter

3. Claims 3-5, 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art Cited

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. (5585936) to Eto et al disclose Joint portion processing device...

US Patent No. (5838837) to Hirose et al disclose image synthesizing device.

US Patent No. (6067153) to Mizuno discloses pattern defect inspecting apparatus.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (703) 306-5918. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BHAVESH MEHTA can be reached on (703) 308-5246. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communication and (571) 273-8300 for after Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PATENT EXAMINER

Yosef Kassa



07/20/05.



**SANJIV SHAH
PRIMARY EXAMINER**